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BLENDING THE “E” AND ITS EFFECTIVENESS AT OPEN UNIVERSITY MALAYSIA

Abstract

A significant development among distance learning institutions has been the advancement of blended delivery modes for academic curricula. In comparison to a wholly e-learning environment, the blended approach caters to a variety of learning styles, learner needs and learning conditions. At Open University Malaysia, the blended pedagogical approach has been adopted for the delivery of all its academic programmes. This paper describes a blended approach which includes self-managed learning, face-to-face learning, and online learning. In addition, the paper outlines the results of a qualitative study on the effectiveness of the online discussion forum. The paper concludes with an introduction to the concept of the *evolution of interaction* beyond a blended learning environment, and a description of the Collaborative Online Learning Model developed for the university.

Introduction

The Open University Malaysia (OUM) is the seventh private university and the first institution of its kind in the open and distance learning arena in Malaysia. The journey of OUM begins with the conception of its establishment on August 10, 2000 and its operations proceeding in August 2001. The OUM leverages on the quality, prestige and capabilities of its owners, a consortium of the 11 Malaysian public universities.

The OUM takes pride in its mission of (a) being the leading contributor in democratizing education, (b) developing quality education through multi mode learning technologies and (c) developing and enhancing learning experiences towards the development of a knowledge-based society. Labeled as the “University for All”, the OUM strives to provide flexibility, accessibility, convenience and affordability to those who seek further education and life-long learning opportunities.

The university has 5 faculties, which currently offer 23 academic programmes; 15 undergraduate programmes, 3 programmes at the diploma level, and while 5 programmes are being offered at Masters level. The programmes are offered by OUM through 32 learning centres in both, the Peninsular and East Malaysia.

Despite being a new university in a competitive industry, OUM has received tremendous support from the Malaysian government as well as overwhelming res-

ponse from the general public The growth of the OUM student population has been remarkable throughout the years. The first intake of students consisted of only 753 persons yet the student number has increased to 6,300 in the year 2002. An escalated growth was noted in year 2003 with an enrolment of 20,000 students in that year. At present, the university has an enrollment of over 24,000. These learners are supported by 1,600 tutors and over 250 subject matter experts in their respective fields.

Blending the “e”: a Definition

Hoffman’s (2001) recipe for blended learning is to “start with a few online tutorials, add one synchronous event and a pinch of discussion forums for flavor and stir”.

The Executive Update on March 2001 termed blended learning as a method of educating at a distance that uses technology (high-tech, such as television and the Internet or low-tech, such as voice mails or conference calls) combined with traditional (or stand-up) education or training.

Rosett, Douglass and Frazee (2003) defined blended learning as “...a planned combination of approaches, such as coaching by a supervisor; participation in an online class; breakfast with colleagues; competency descriptions; reading on the beach; reference to a manual; collegial relationships; and participation in seminars, workshops, and online communities.”

What is in a blend?

A blend in learning consists of formal and informal live meetings of face-to-face, synchronous and asynchronous virtual collaborations, self-paced learning, as well as performance support.

In face-to-face formal meetings, instructor-led classrooms, workshops, coaching and mentoring and even on-the-job training take place. Learners directly interact with their instructors in a formal setting with their progress being closely monitored. On the spot corrections and improvement are enabled as swift actions are taken. In an informal context, collegial connections are established as learners develop mutual and uncompetitive feelings amongst their peers. This scenario also encourages the building of work teams as individuals contribute efforts to achieve their common goals. The active socialization of learners will naturally lead to role modeling as learners look for outstanding personalities and behaviors to model themselves after.

An example of synchronous virtual collaboration includes live e-learning classes. Learners are able to attend their virtual classes at real-time from whatever a distance despite not being physically present in the classroom. Counseling and consultations could also be conducted this way through e-mentoring. Learners are assigned an e-mentor who may advise and counsel them even though they are miles apart. On the other hand, asynchronous virtual collaborations such as emails, online bulletin boards, listservs, and online communities serve to provide learning with a delayed time frame.

The blended self-paced learning which comprises web learning modules, online resource links, simulations, scenarios, video and audio CD/VCDs, online self assessment and workbooks are combined in an effective manner to enable learners to develop learning skills and knowledge building according to their own speed and abilities. At this juncture, learners are seems to be responsible and play a vital role in their own learning.

Performance support in the form of help systems, print job aids, knowledge databases, documentation and other performance and support tools are utilized to assist learners when they are in need of technical assistance and support in their pursuance of knowledge.

Why blend the “e”?

The five main forces that pressure the blending of “e” are namely the humanization of education, the democratization of education, an optimization of resources, and the goals of efficiency and effectiveness.

The humanization of education is mainly attributable to the vast advancement of technology today. Revolutions in the delivery of education have changed the way knowledge is built and absorbed. The exploitation of a wide variety of media and tools in education enables opportunities for diversified learning as individuals are now exposed to all available means of learning. There is no longer a single way to learn. Education today can be brought directly to the individuals’ doorsteps via many modes.

The democratization of education has ensured that opportunities are made available to all who seek knowledge in their pursuance of excellence and self improvement. No longer will individuals be deprived of an opportunity for education in the present day, as education is now considered a basic necessity of civilization. No learner will be shortchanged with the variety of media used in education. Learning can occur in any possible way that one could think of.

Another force which has pressurized such a blending is the optimization of resources. With a wide variety of media and educational tools available, an education provider can select the best use of each media based on its characteristics and potential effectiveness, to be combined in the right mix and then packaged to learners. Apart from contributing to the education settings, these education providers are also indirectly creating opportunities in their own interests. The proper selection balance can then also be used to cater for the different needs of learners.

The need for efficiency in terms of reducing distance and speeding up the process of delivering education also calls for learning to be blended. Educational content can now be delivered in many forms through blended learning. In distance education, the physical gap between learners and their instructors is reduced through the efficiency of this blend learning. Besides catering for contingencies such as last-minute announcements, the efficient blend could also speed up the processing of administrative matters. In the context of online socialization, on the other hand, individuals form closer ties during their interactions with one another.

The call for blended learning is also viewed as advantageous when effectiveness is gained in the process of increasing learner engagement and their depth of learning. In this sense, effectiveness is measured by three elements, namely the improved communication via emails and e-forums, an enhanced pedagogy which provides a deeper, insightful and meaningful learning, and effectiveness in supporting an online community of learners.

What is the best way to blend the “e” and the non-“e”?

When blending different medias of the “e” and the non-“e”, several rules of thumb should be adhered to and the following guidelines should be taken into consideration. The best blended learning must depict understanding and meeting learners’ needs. Prior to satisfying the needs of different learners and learners different needs, the education provider must first be aware of those needs, to thus be able to hit the nail on the right spot, and so provide the right solution for learners. Catering to different learning styles also deserves a plus point. In acknowledging the different ways in which individuals learn, the education blender should display sensitivity to learners’ learning styles and develop the right blend to suit those varying styles. In order to be successful, blended learning must be able to assist learners in achieving their (and its) learning objectives. Besides, blended learning should also play a part in making education affordable, flexible and convenient to all. At the end of the day, subsequent to all efforts mentioned above, blended learning should be viewed as a tool to make the learning process fun and enjoyable for learners. If it is not fun, it is not learning.

How to select the right blend?

Selecting the right mix, according to Bersin (2003), is dependent on two or three of the following ingredients, namely classroom instructions, web-based and CD ROM-based courseware, webinars, conference calls, virtual labs, simulations, text-based job ads, EPSS, portals, communities of practice as well as mentors. Elements such as audience, time, scale, resources, content and business application affect the choice of a right blend. The level of skill, time available and motivation of the audience have an impact on the blend. Time is a constraint in the choice of blend as education providers struggle to develop the right blend to deliver. The audience size as well as the urgency for updated information should also be of concern. Another main issue of influence in selection of the right blend is the resources owned by the education providers. Limited financial budgets and a lack of expertise of its knowledge workers are viewed as barriers to the adoption of blended learning. The physical resources required to implement the right blend have to be considered as well. From the business application point of view, education providers must ensure that there is continual man power expertise in the organization to be able to cope with the changes in its adoption and implementation of blended learning.

The Blended Pedagogy at OUM

At the OUM, delivery of its academic programmes is via the blended mode of learning. Tan Sri Dato' Dr. Haji Abdullah Sanusi Ahmad, the first President and Vice-Chancellor of the OUM, envisioned that the blended mode of learning would be that type best utilized for its learners. It is about fitting together a variety of media or pedagogies that have proven effective. He stated that OUM decided "to adopt the blended learning approach as we recognize that each mode of learning has its strengths and weaknesses ... We recognize the key to blended learning is selecting the right combination of learning modalities that will bring equal and satisfying returns to both the organization and learners. (Ahmad, 2003, p. 1)"

The three components of blended learning at the OUM are: face-to-face tutorials, online learning and Self-Managed Learning (see *Figure 1*). The blend of these three components appears to have been the solution that has worked well for the majority, if not all, students at OUM. The blend of print and non-print, electronic and non-electronic, face-to-face and online has attracted thousands to enroll at OUM.

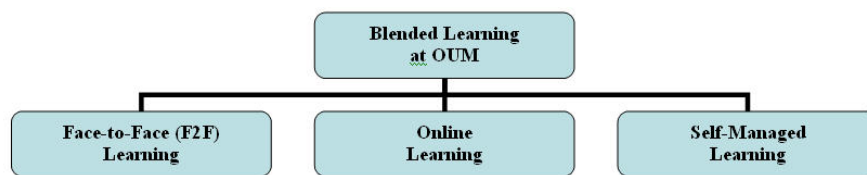


Figure 1: Blended Learning at Open University Malaysia (OUM)

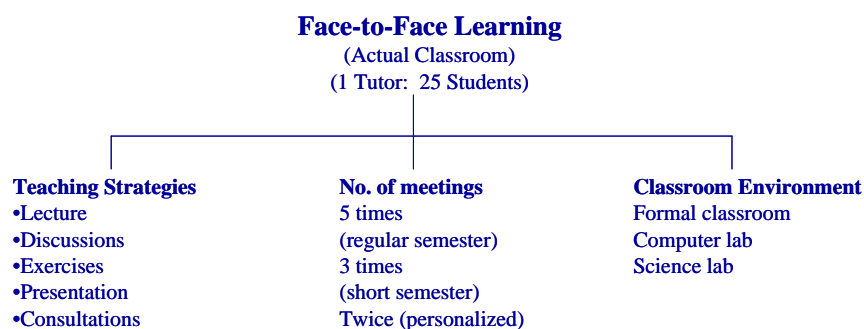
OUM had the best of opportunities in terms of learning from other open universities about what has worked well for their distance learners. The country is also fortunate to have benefited from the Internet age as well as being at a time when the applications ICT were being strongly encouraged by the government. Hence, e-learning or, more specifically, online learning naturally became part of the blended learning at OUM.

Interestingly it was found that among 947 OUM students who responded to an online poll, 528 (56 percent) enjoyed the face-to-face learning, 237 (25 percent) enjoyed online learning and 182 (19 percent) enjoyed Self-Managed Learning among the three modes of learning. The online poll was carried out as part of the second issue of *Learner Connexions*, an online bulletin aimed at addressing a variety of learning issues.

Face-to-Face (F2F) Learning. *Figure 2* illustrates the F2F learning component of the blended mode of learning at OUM. Each subject incorporates at least five tutorials in the normal semester (twice a year) and three tutorials in a short semester (once a year). Based on the online poll, the majority of OUM learners enjoy the F2F learning most. It should be noted that many students take at least an hour to reach their respective learning centres. In the states of Sabah and Sarawak in East Malaysia, many learners travel the whole night, arriving early in the morning for their

tutorial classes and stay overnight for tutorials on the next day. Lives this hardship we need not expect that online lectures or video conferencing of lectures would have attracted or sustained the interest of learners had these been made part of the “blend.”

The tutors appointed by OUM are from both the academia and industry and they provide the face-to-face learning once a fortnight. Tutors employ a blend of a variety of learning activities: lectures, group discussions, exercises and presentations. At times personal academic consultations are provided to those in need. Each tutor will have up to 25 learners per group. Tutors and students usually meet in a classroom or computer laboratory at one of the 32 learning centres of OUM or in designated science or engineering laboratories. Where class enrolments are fewer than five learners, the tutor offers personalized learning where they meet face-to-face at least twice in the semester.



*Figure 2: Face-to-Face Learning at the Open University Malaysia
(Adapted from Abdullah, 2003)*

Online Learning. Online learning at OUM takes place in what is called the virtual classroom. (Figure 3) The tutor who provides the face-to-face interactions also becomes the learners’ online tutor throughout the entire semester. Online interactions between tutor and learners or between learners and learners may take place either asynchronously via discussion forums or synchronously via chat rooms. These discussion forums and chats are provided via the myLMS e-learning platform developed for the university.

Online content is made available in the various folders of respective courses in the myLMS e-Learning platform. The content could be slide presentations prepared by the tutor(s). Tutors are encouraged to share resources they have prepared or found on the Internet and this has generally worked out very well in supporting the needs of learners.

In addition, a tutor or the subject matter expert who contributed to the printed self-learning modules can also upload PDF or other electronic documents for their students to view or download. These could be additional notes, journal articles, slide presentations, assignments and other related learning materials. These are usually

placed in a Digital Drop Box in the myLMS platform that can then be utilized by other tutors and students of the same subject. Similarly, OUM can make available specially created learning objects for the learning community. In addition, selected links that would be useful to help learners achieve learning objectives can be announced or made available online. Announcements can also be posted online.

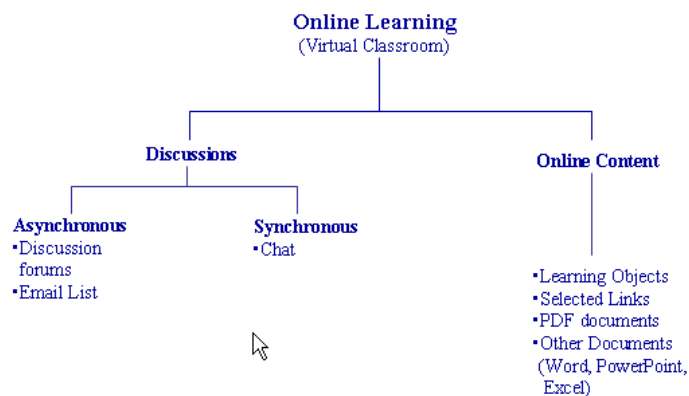


Figure 3: Online Learning at the Open University Malaysia (adapted from Abdullah, 2003)

It is agreed that for online learning to work, all tutors and students need to be connected to the network. Ideally, they need to have access to the Internet from their homes. In addition, discussion forums will work better if everyone knows what is expected and how they can each benefit.

Self-Managed Learning. Self-Managed Learning (SML) is the third important component in OUM's blended learning (Figure 4). SML requires students to read their modules, which provide the essential content, this being interspersed with activities to help learners understand and apply such learning. There are tutorial questions, exercises and activities that require students to think. The modules have been designed to be as interactive as possible. They have also been specially written for OUM's needs, and when perfected, should be able to stand on their own. Students are also encouraged to visit and read online resources, refer to library materials (physical or electronic), visit recommended Web sites and complete other learning activities at their own pace, wherever they wish and whenever they want.

OUM has an excellent digital collection comprising databases of over 40 000 titles of online books and online periodicals that the library subscribes to. However, SML is one of the more difficult modes for learners as a significant number of learners report that they find it difficult to find the time to actually study. This was corroborated by several tutors during a study conducted recently (Kuldip & Abas, 2004). The issue of time management has been recognized as one of the challenges faced by learners at OUM. This is, however, being addressed by OUM in the form

of counseling sessions, seminars on time management or articles published in *Learner Connexions*.

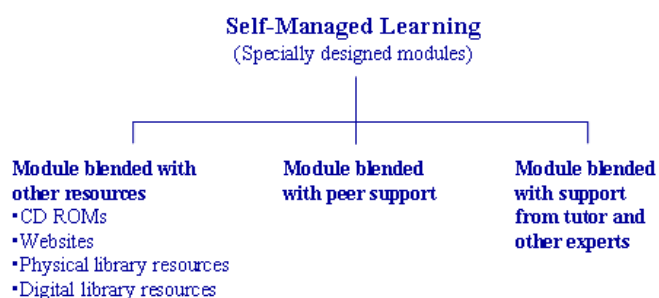


Figure 4: Self-Managed Learning at the Open University Malaysia (adapted from Abdullah, 2003)

Background to the study

A study was conducted to evaluate the effectiveness of online discussion forums at the OUM. Three different data sets were obtained, namely a qualitative analysis of tutors' interactions with learners, a quantitative analysis of learners' perceptions as regards online learning, and a quantitative analysis of tutors' perceptions of online learning. This study highlights the qualitative analysis of the interaction between tutors and learners, focusing on the asynchronous online learning conducted by the OUM using its learning management system, myLMS.

Objectives of study

The objective of this study is to ascertain the quality of the online discussion forum provided by OUM tutors for the Faculty of Education, Arts and Social Sciences (FEASS). In this study, the perceived effectiveness of online discussions among OUM learners and tutors will be determined. The quality of online interactions will be measured by analyzing the message postings of both learners and tutors using predetermined rubrics.

Quality of online discussion provided by OUM tutors and learners

According to the Southern Regional Education Board in 2001, it takes both technical competence and effective pedagogy to teach in an e-learning environment. The quality of this engagement is affected by pedagogically-driven instructional design, which takes into account Bloom's Taxonomy of structured learning objectives with progression as well as the application of cognitive learning using the Gagné's methodology.

A total number of 35 tutors and 255 students were involved in this study. 922 online postings by tutors and 1929 postings by learners were analyzed.

Data Analysis

The quality of online interactions was measured using the following rubrics namely motivational support, communication, engaging the learner, knowledge building, encouraging higher order thinking, and collaboration.

Rubrics are specific criteria or guidelines used to evaluate a person's work or performance. In this study, each message posted by tutors and students was analyzed according to each question in the checklist for the online discussion forum instrument. These messages were then read again to analyze if they focused on the subject content. Finally, the same messages were read for a third time and analyzed according to the criteria set. Each posting at this stage was given the ratings of 'excellent', 'good', 'satisfactory' or 'requires more effort', based on the mentioned criteria.

Findings

Motivation is the first rubric used to evaluate the quality of online interactions. The three criteria for appraising motivating elements in messages posted include the degree of encouragement by a tutor to attract inactive learners to participate in online discussions, the extent to which positive feedbacks were given to encourage learners as regards postings, as well as motivational messages posted online by tutors.

The results of the study showed that a total of 69% of online tutors (*Figure 5*) provided some form of motivating messages – as compared to 31% that did not demonstrate any motivational elements at all. Of these statistics, only 3% of tutors motivated learners at the beginning of a message as compared to 31% of them who prefer to post motivating messages at the end. On the other hand, 35% of online tutors gave inspiration to their learners both at the beginning and at the end of their messages.

The second rubric used in the study is communication. The appropriate language used in the postings, and the number of typographical errors represent the quality of communication in the online setting. The effectiveness of the language used to convey the right message from tutors to students also became an important aspect in measuring the quality of online interactions. The study found that 89% of the postings (*Figure 6*) analyzed showed excellent communication strategies as rep-

resented by the three elements mentioned. A total of 10% of online tutors were categorized as good, when two out of the three elements were noted in their postings while messages which showed only a single criterion fulfilled were seen as being satisfactory. 1% of the postings were in this category.

In the third rubric, messages posted by tutors were analyzed to examine whether tutors' postings attempted to engage learners online discussions. In this analysis, the extent to which learners were asked to refer to other resources or materials from websites or books was observed; while the capacities of learners as regards being expected to complete activities or exercises which require mental effort were also evaluated.

The results from the study reveal that only 5% of tutors' postings (*Figure 7*) showed the ability to engagement of learners in an active manner of learning. Students displayed initiatives to complete tasks given by their tutors. However, a total of 77% of tutor's postings failed to oblige learners to act in the ideal or most beneficial manner. Learners did not engage themselves in exercises and activities provided by their tutors. As a whole, tutors failed to get learners to engage in online discussions in a constructive way. 18% of the postings required more effort when it came to engaging learners.

The fourth rubric evaluated the quality of online discussion based on the capabilities of postings to instill knowledge-building amongst learners. Postings were observed so as to see the ability of learners to get new knowledge by coming up with correct answers to questions. The skills of gathering information while connecting one topic to another also displayed such knowledge building.

Of the analysis, 16% of the tutors' postings (*Figure 8*) supported knowledge building. Students displayed their abilities to synthesize information coming from various topics and were able to respond to questions with intelligent answers. However, a total of 59% of the postings were seen as requiring more effort.

Higher order thinking was the fifth rubric studied in evaluating the quality of online interactions. In this rubric, the criteria used included the requirement of that learners be able to analyze, synthesize and evaluate or judge information posted by their tutors. Only 11.2% of tutors' postings (*Figure 9*) encouraged higher order thinking. On the other hand, a total of 88.4% of the postings were not successfully applicable to the thinking process. Of these statistics, only a mere 0.1% of postings prompted learners to analyze and synthesize as well as evaluate tutors' messages.

The sixth measure of quality online postings was collaborative learning. Three criteria under this rubric which reflected collaborative learning include the extent to which tutors promoted interactive learning, the degree of support given by tutors using various techniques (such as probing, asking groups to reflect on issues and challenge each others' ideas), and finally the level of group self-supervision and self-organized activities.

The results revealed that only 2.4% of postings (*Figure 10*) encouraged collaborative learning. A disappointing total of 97.6% of tutors' responses did not display any of the mentioned elements. Thus more effort is required on the part of tutors to instill collaborative learning amongst OUM learners.

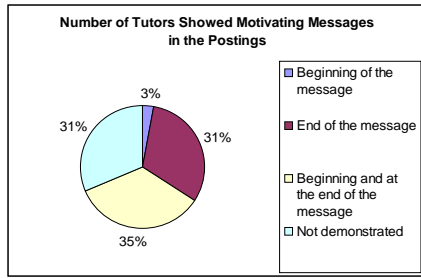


Figure 5

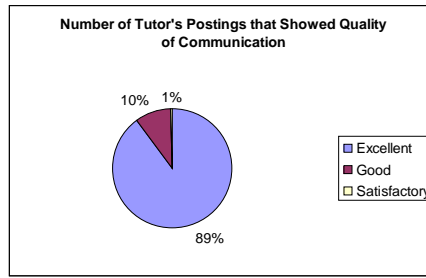


Figure 6

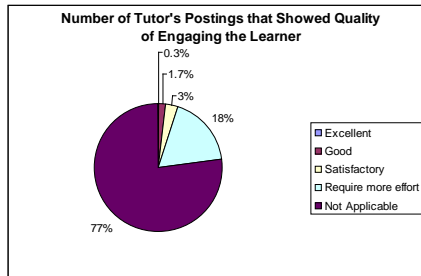


Figure 7

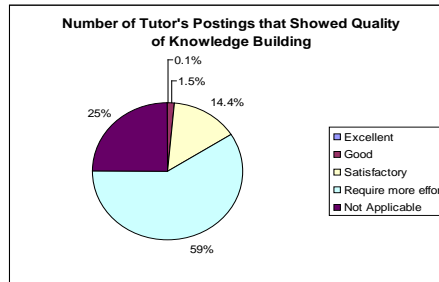


Figure 8

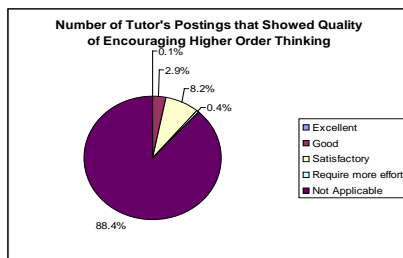


Figure 9

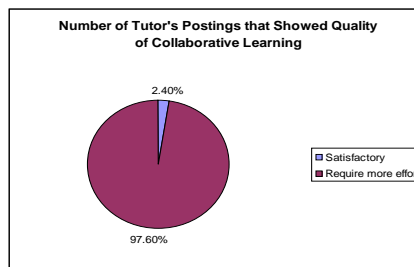


Figure 10

The overall findings of the study are summarized as follows. A total of 68% of OUM tutors provided some kind of motivation to learners in the online communication context. A majority of 90% of tutors communicated excellently, as compared to 9% who were good and 1% being satisfactory. In engaging the learner, on the contrary, only 0.3% of the tutors were rated as excellent and 1.7% as good. A total of 98% of tutors needed to put more effort into improving learner engagement. The situation was similar regard to knowledge building where only a minimal of 0.1% of postings were rated as excellent, while 1.4% were rated good. A total of 98% of tutors required more effort to supplement their postings with some elements of

knowledge building. Almost 92% of OUM tutors required further support in encouraging higher-order thinking, while approximately 98% needed to make more effort in encouraging collaborative learning.

Recommendations

Based on the study, the following recommendations are to be made. There exists a need to change mental models and construct new knowledge building that can empower learners to „surpass themselves”. Tutors should be taught or trained in how to put on emphasis on higher order questioning and encourage critical thinking amongst students. Tutors must also point learners to relevant sources to be found on the Internet and direct learners’ with questions back to the forum instead of giving straight answers and their own directions. Tutors need to be ‘bridge builders’ to ensure that learners take an active part and engage in collaborative learning. Students should be informed of what tutors expect for the discussions – and to be selective in terms of which messages they engage themselves in.

The Evolution of Interaction

Beyond the blended learning framework is the *evolution of interaction* (Butler and Coleman, 2003) – that is, an interactive curriculum that provides for interactions within groups of learners, and among learners and tutors. In such a scenario, content is not static, but evolutionary, as it develops with the understandings, ideas and learning outcomes experienced by tutors and students. At the initial stage of blended learning, students are individually connected to data and content in isolation. Such connecting with data and content then spreads to include more individuals. Finally, within the interactive curriculum individuals will be able to interact with other individuals using data and content.

The OUM COL Model

To cite a case in point, the OUM has piloted a fine-tuned approach to online discussions. Termed the Collaborative Online Learning (COL) model (see *Figure 11*) learners are given a content-specific activity for discussion online for a certain period of time. Using asynchronous discussions, students will be involved in several learning processes such as discussions, explanations, justification, a sharing of information and resources, and analysis and problem-solving.

The four components of the model are: **General Forum**, **Academic Forum**, **Shared Responsibility** and **Common Goals**. The **General Forum** allows learners to post questions and responses to their tutors or to peers. This forum is meant to give an exchange of information on non-content related matters (such as schedules, deadlines and learning resources). The **Academic Forum** is focused on content-specific activity such as assignments and tasks for formative assessments. The crucial difference between the two is that the former may not be directly moderated by

the tutor but by learners themselves. The latter is more structured and will require the tutor's presence on a regular basis, and while quality moderation is essential.

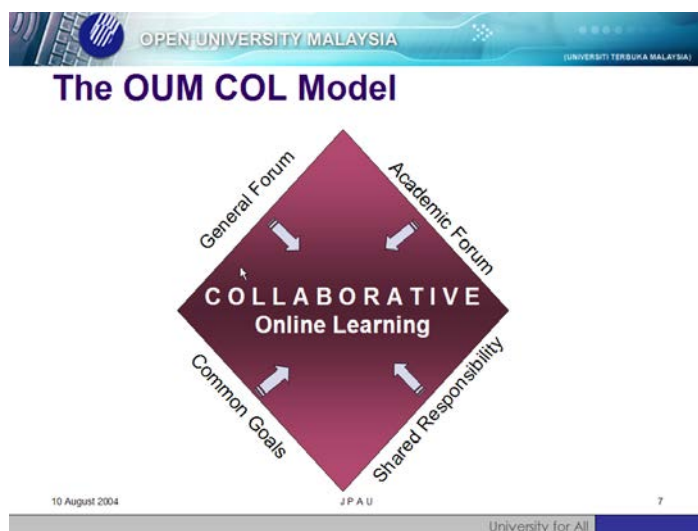


Figure 11: The OUM COL Model

Shared Responsibility refers to a commitment from three parties: the OUM, tutor and learner. Each has a significant role to play. While the OUM is responsible for providing the means for online discussions and the understanding of content, the tutor is accountable for guiding and providing constructive feedback to learners. Students are responsible for his or her own learning and are expected to contribute to discussions by citing examples, discussing details, responding to each others' ideas by agreeing or disagreeing, and sharing knowledge and resources related to the tasks.

The implementation of the model will not be effective unless the three parties share **Common Goals** in the learning outcomes. This sense of common goals is the basis for providing a collaborative virtual learning environment, as is utilization of the communication channel (the myLMS E-Learning platform) by the teaching-learning community.

The implementation of an interactive curriculum could be done using the available forum. Two suggestions enabling this curriculum to take place are forums called myClassroom and myLounge. myClassroom is an academic forum which is task- or assignment-focused. It seems to build analytical and critical thinking skills amongst learners. In this forum learners study together with their tutors and their peers, as well as share ideas, opinions, knowledge and resources. Such forum enables the development of teamwork and encourages its members in giving and providing feedback. myLounge, on the other hand, is a general forum. Here, learning skills and guidance on understanding any subject content are provided. Students

eventually develop these skills by their participating in the forum. The forum also serves as an avenue via which to support social needs as well as solve technical issues.

Effective COL within an Interactive Curriculum

For an effective COL to take place within an interactive curriculum, the following criteria should be adhered to. Effective COL must first be purposeful. Both tutors and students must understand the aims of a discussion which is the constructive means to an end. COL must also be meaningful and practical: discussions in the curriculum must be related to achieving course objectives. Besides this, effective COL must be able to engage learners by means of tasks that help persons understand their learning goals. In this context, stimulating curriculums will attract learners to have frequent discussions as well as play an active role in contributing and sharing ideas and knowledge with others. Finally, effective COL must be intellectually rewarding. Students, upon completion of the course, should be equipped with new knowledge, appropriate skills and the right attitude.

At the end of the day, “The magic is in the mix, and the beauty in the blend”.

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